



Application no. 10 / 042,433, Multi knife cutting device.

Amendments to claims. August 14,2004. Current amendment : September 8 , 2004.

I Claim :

Claims 1 to 6 , ( Cancelled).

Claims 7 to 10, ( Cancelled.)

11. ( Previously presented )

A Multi knife cutting device comprising :

10 a cutting means having multiple knives;

a base cum guide member with designated space for vegetables and slots for locating the cutting means:

a means for mounting the cutting means on the said base cum guide;

the guides on either side of the slots in the base cum guide for positive support of the cutting

15 means ;

the said slots in the base cum guide enabling the cutting means to travel past the vegetables for clean cut;

the said vegetable space having structural support to stop vegetable sliding;

location of vegetables close to fulcrum of cutting means for minimizing cutting loads.

20 12: ( Withdrawn )

~~The multi knife cutting device of claim 11 comprising:~~

~~the cutting means having six rotary knives connected by a fulcrum bolt and spacers to five handles;~~

~~the base cum guide member further comprising a rectangular board with grooves on top surface~~

25 ~~for guiding knives, a guide with slots fitted upright to one end of the board ,the slots in alignment with the grooves of the board, and a designated space for vegetables before the guide with slots;~~

~~the rotary knives mounted on the grooves in the board for linear travel;~~

the grooves on the board and the slots in the guide forming a distinctive path for travel of the 30 rotary knives;

~~the guide with slots for stopping the vegetable sliding and to clear the cut pieces between the rotary knives in novel manner;~~

~~the knife handles projecting at the front beyond the fulcrum up to the knife edge to prevent cut pieces from traveling with the rotary knives;~~

13. ( Withdrawn )

The multi knife cutting device of claim 11 comprising :

the cutting means having six straight knives with fulcrum at one end and independent handles at  
5 the other end ;

the base cum guide member further comprising a rectangular base with two vertical supports and  
an end stop mounted on it, on either side of a guide with slots which is fitted close to one edge  
of the board top surface ;

10 the two vertical supports connecting the six knives through fulcrum bolt and spacers, with the  
knives in the starting vertical position partly in the slots of the guide with slots, arising from the  
close location of supports to the guide with slots, to give positive support to the knives right  
from the beginning of the cutting stroke ;

the fulcrum bolt giving pivot action to the knives ;

15 the top surface of the guide with slots acting as the vegetable location, the closeness to the knife  
fulcrum reducing the load arm and increasing mechanical advantage, the raised portion at the  
end of the guide with slots stopping vegetable sliding ;

the slots in the guide with slots permitting the knives to travel past the cut pieces for a smooth  
cut and come to rest on the end stop, without the knife edges touching the board ;

20 the flexibility resulting from independent knife handles in selecting the number of knives  
depending on the cutting loads, achieving smooth cuts ;

14. ( Currently amended )

The Multi knife cutting device of claim 11 with inclined cutting action, comprising :

the cutting means having six straight knives with fulcrum at one end and at the other end the  
25 handles connected in a manner to facilitate combination of the outer four knives as one unit and  
the middle two knives as another unit ;

the base cum guide further comprising seven rectangular guides of sheet structure, two base  
angles one on either side of the guides, spacers to create gap between the guides to form slots, an  
end stop between the angles below the knife handle joint for the knife travel, all connected  
30 together with screws to form a frame type structure ;

the fulcrum screw with washers to connect the six knives directly to the base cum guide after  
locating them in the guide slots ,giving a pivot action to the knives, the knives resting on the end  
stop before the knife edges touch the slot bottom, stopping edge damage .

15. ( New ).

The multi knife cutting device, inclined cutting action of claim 14 further comprising ;  
a vegetable enclosure formed by a rectangular cutout in the base cum guide structure adjacent to  
5 the knife fulcrum, the location of the enclosure reducing the lever arm and the vertical wall of  
the enclosure preventing vegetable sliding ;

the slots formed by the guides of the base cum guide extending below the vegetable platform,  
enabling the knives to go past the vegetable cut pieces for a clean cut;

the guides on either side of the slots in which the knives are located, supporting the knives on  
10 the sides beyond the vegetable enclosure through out the cutting stroke for a clean cut;

the combination of knife handles into two units, the outer four as one and the inner two as  
another, giving the flexibility to use two, four or six knives at a time for cutting depending on  
the type of vegetable, to achieve smooth cuts;

the base cum guide having multiple functions like supporting knives and vegetables, solidly  
15 guiding the knives through out the cutting stroke, preventing knife bending in the process,  
allowing the knives to go past the vegetables to free the cut pieces from between the knives.

B.Gopinath

20

25

30

35

40

14. ( Currently amended )

The Multi knife cutting device of claim 11 titled "Multi knife cutting device, inclined action",

5 comprising :

the cutting means having six straight knives with fulcrum at one end and at the other end the handles connected in a manner to facilitate combination of the outer four knives as one unit and the middle two knives as another unit ;

10 the base cum guide further comprising seven rectangular guides of sheet structure, two base angles one on either side of the guides, spacers to create gap between the guides to form slots, an end stop between the angles below the knife handle joint for the knife travel, all connected together with screws to form a frame type structure ;

the fulcrum screw with washers to connect the six knives directly to the base cum guide after  
locating them in the guide slots in the base cum guide, giving a pivot action to the knives, the

15 knives resting on the end stop before the knife edges touch the slot bottom, stopping edge damage ; ~~the direct mounting without knife frame making the device compact and more functional~~ ;

~~the base cum guide further containing a rectangular vegetable enclosure formed by a rectangular recess in the guides, adjacent to the knife fulcrum , minimizing the load arm and increasing the~~

20 ~~mechanical advantage, the vertical supports of the enclosure preventing vegetable sliding ;~~  
~~the slots in the guide frame which extend below the vegetable platform, enabling the knives to go past the cut pieces for a clean cut;~~

~~the guides on either side of the slots fully supporting the knives throughout the cutting stroke for a smooth cut ;~~

25 ~~the capability to use two, four or six knives at a time depending on the size and type of vegetable resulting in smooth cuts without over loading.~~